PHENIX Run16 status
time meeting 06/13/2016

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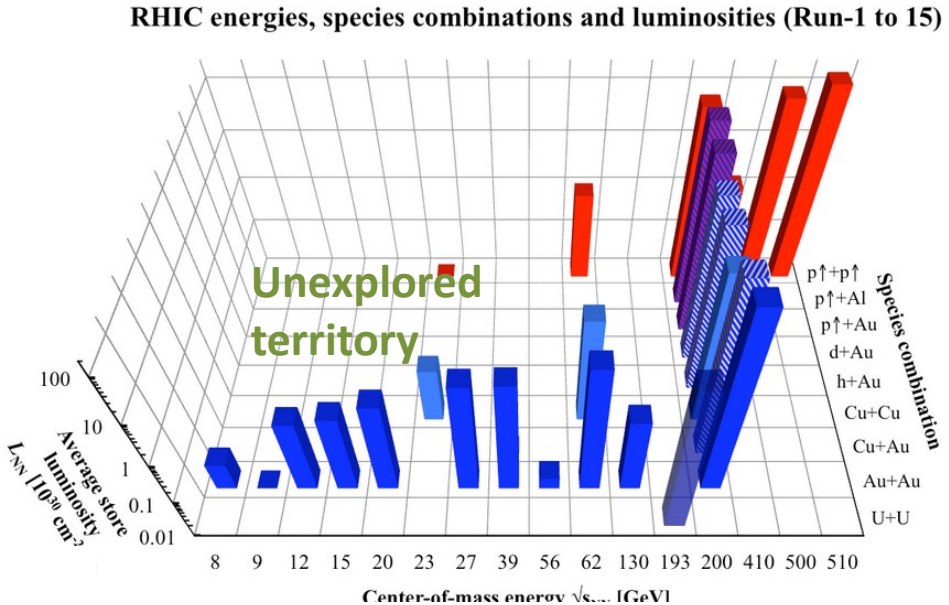
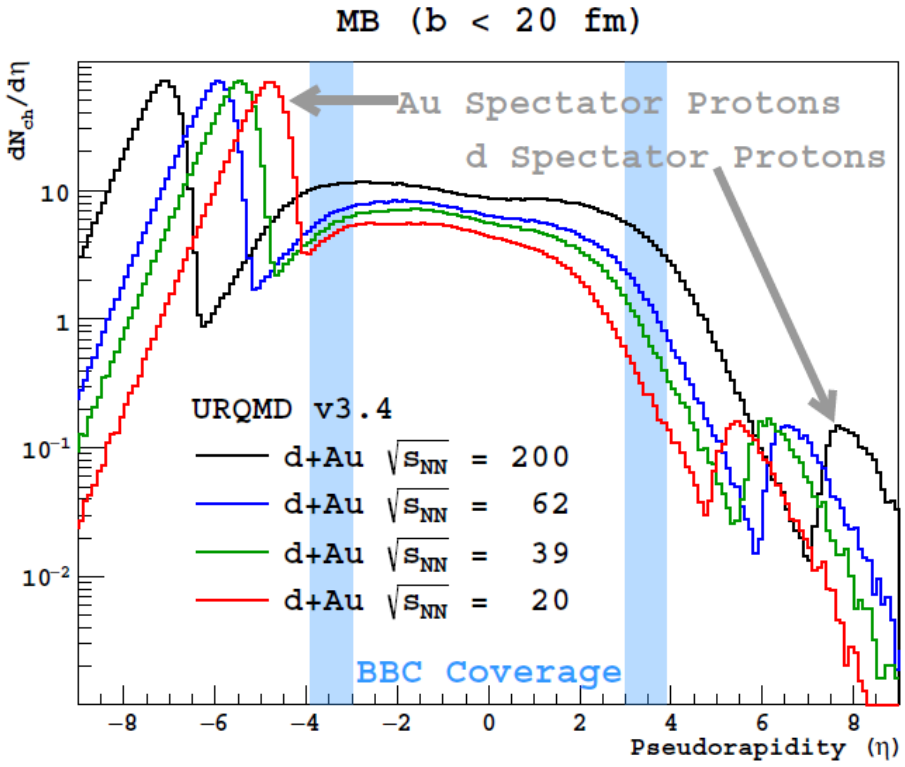
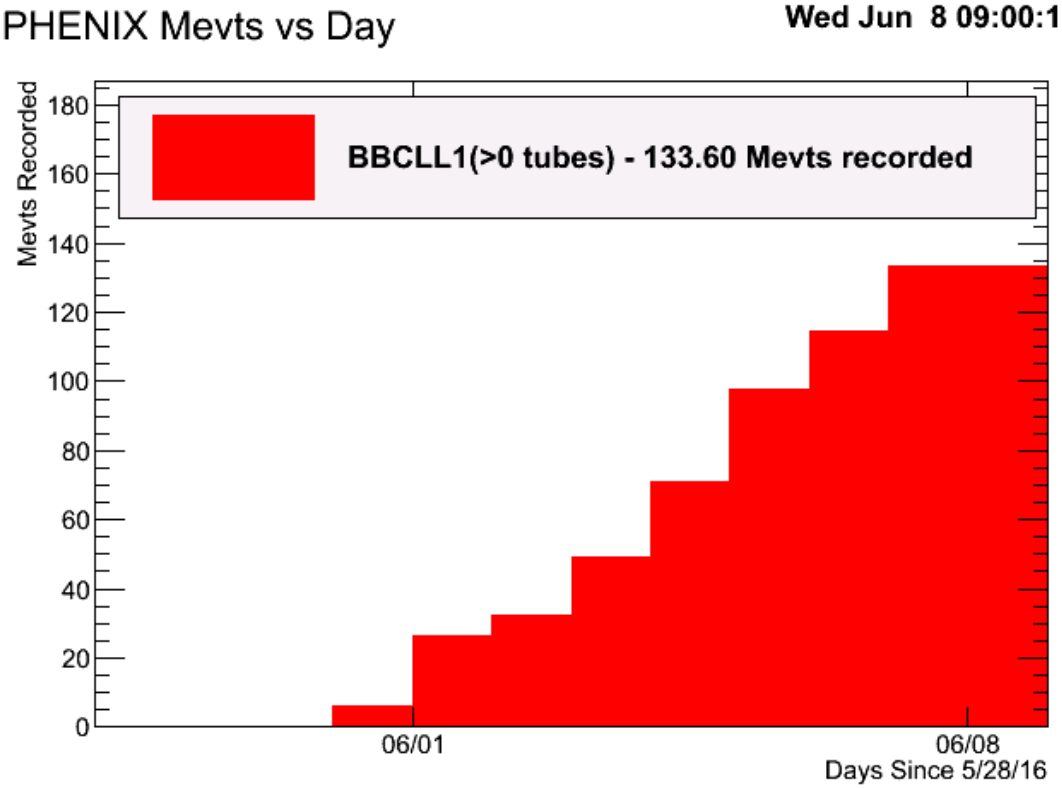
dAu 20 GeV


RHIC energies, species combinations and luminosities (Run-1 to 15)
Unexplored territory
Species combination
p↑+p↑
p↑+Al
p↑+Au
d+Au
h+Au
Cu+Cu
Cu+Au
Au+Au
U+U
Average store luminosity
100
10
1
0.1
0.01
8 9 12 15 20 23 27 39 56 62 130 193 200 410 500 510

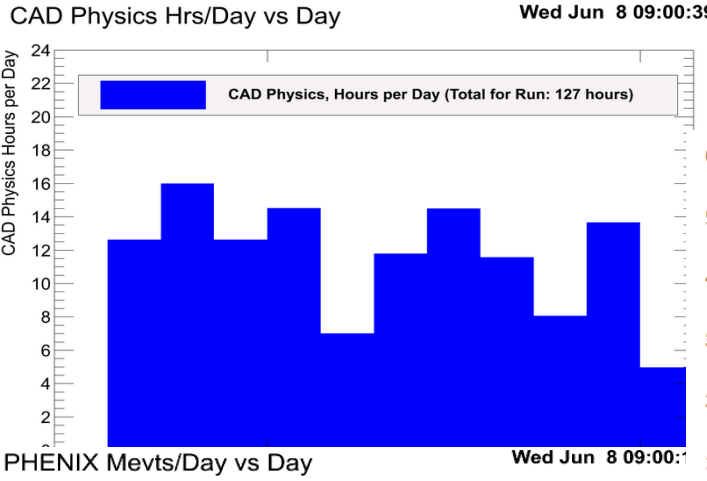

MB (b < 20 fm)
Au Spectator Protons
d Spectator Protons
URQMD v3.4
d+Au √sNN = 200
d+Au √sNN = 62
d+Au √sNN = 39
d+Au √sNN = 20
BBC Coverage
dNch/dη
Pseudorapidity (η)

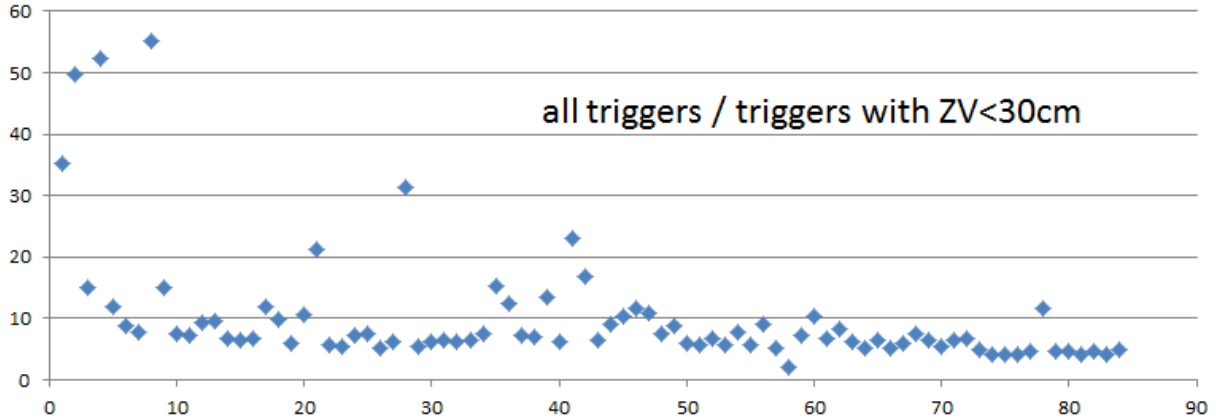


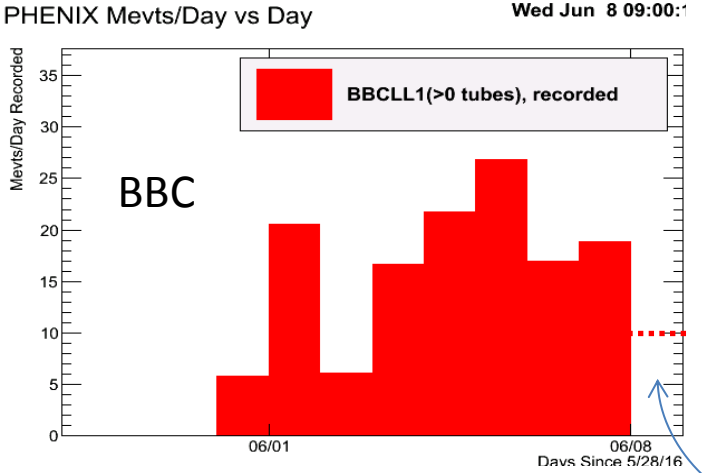
dAu 2O Gev

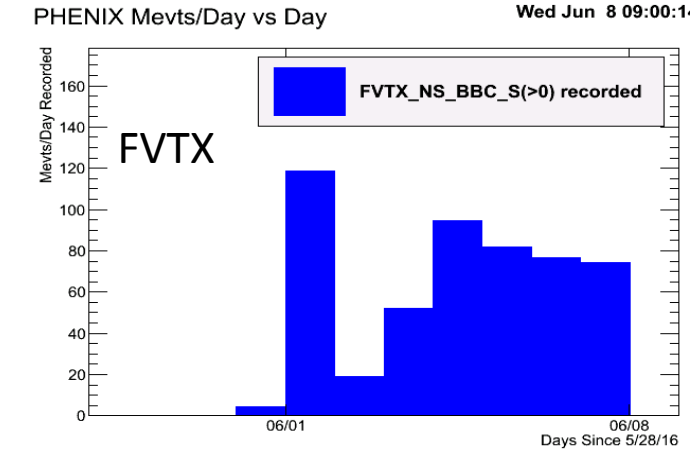
After offline reconstruction, it is likely that the number of 5% most central events with Zvertex<10cm
Be at least 7.8 M events

Between the 7M BUP goal and the 9M « updated » goal









Evolution with time toward more consistency (wide triggers more sentitive to backgrounds)

By the way: loss of memory due to power dip ?

→ **Total 8.6 M !?**

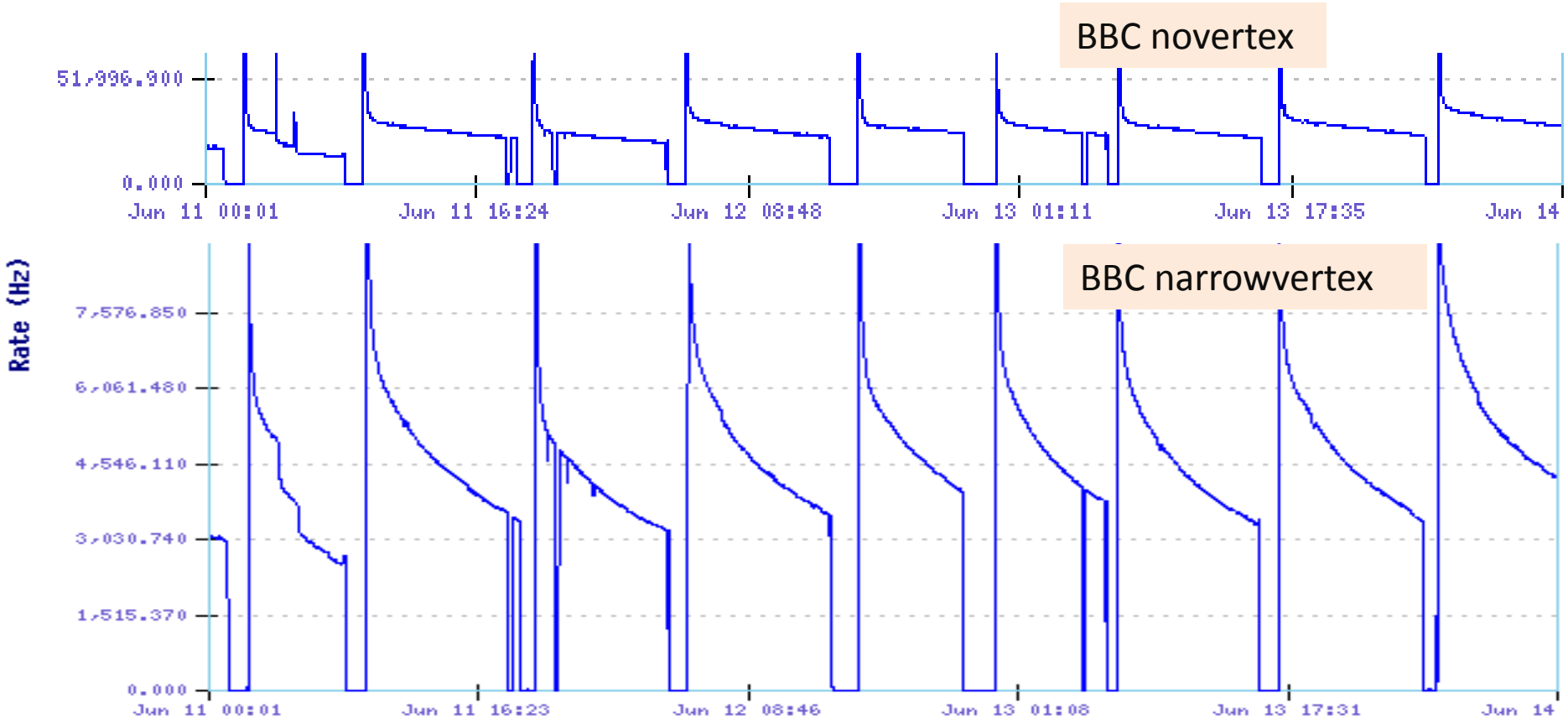
Great data set ! Going to Wednesday morning was very fruitful

dAu 20 GeV was a challenge, it was difficult and started slowly, but improved a lot through time.

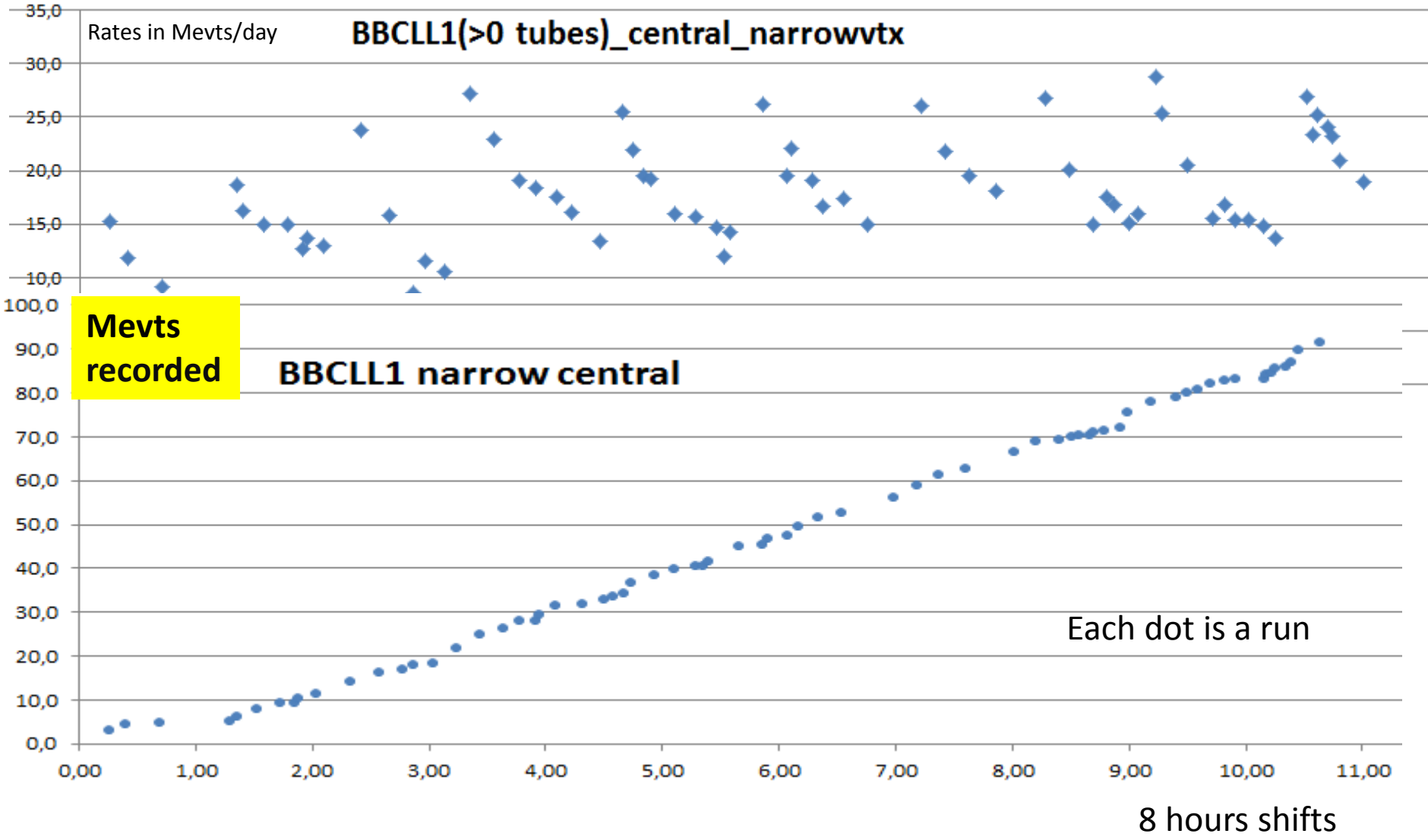
It was very useful to give it enough time.

The result is going beyond the BUP goal .
11 days after its start, it is finally a big success !

d-Au 39 GeV: a dream beam ?



Very smooth running



How many events in the relevant domain ? (Z<10cm, 5% most central)

- Two main triggers: BBC and FVTX, restricted to 15% most central collisions
- FVTX has a wide Zvertex,
- BBCnarrow is already ~Zv<10cm

	BBC narrow central	FVTX central
Nevents triggered (Mevts)	102	566
Fraction <10cm	0,9	0,27
Nevts Z<10 (Mevts)	92	153
« Central »/ all centralities	0,132	0,14
5%	0,05	0,05
Nevts 5% most central Z<10	35	55
efficiencies	0,55	0,85
Nevts both triggers	30	30
Total 5% most central Z<10	35+55-30 =	**60**
Extrap 148/95h	148=7*24-16-4	**93**

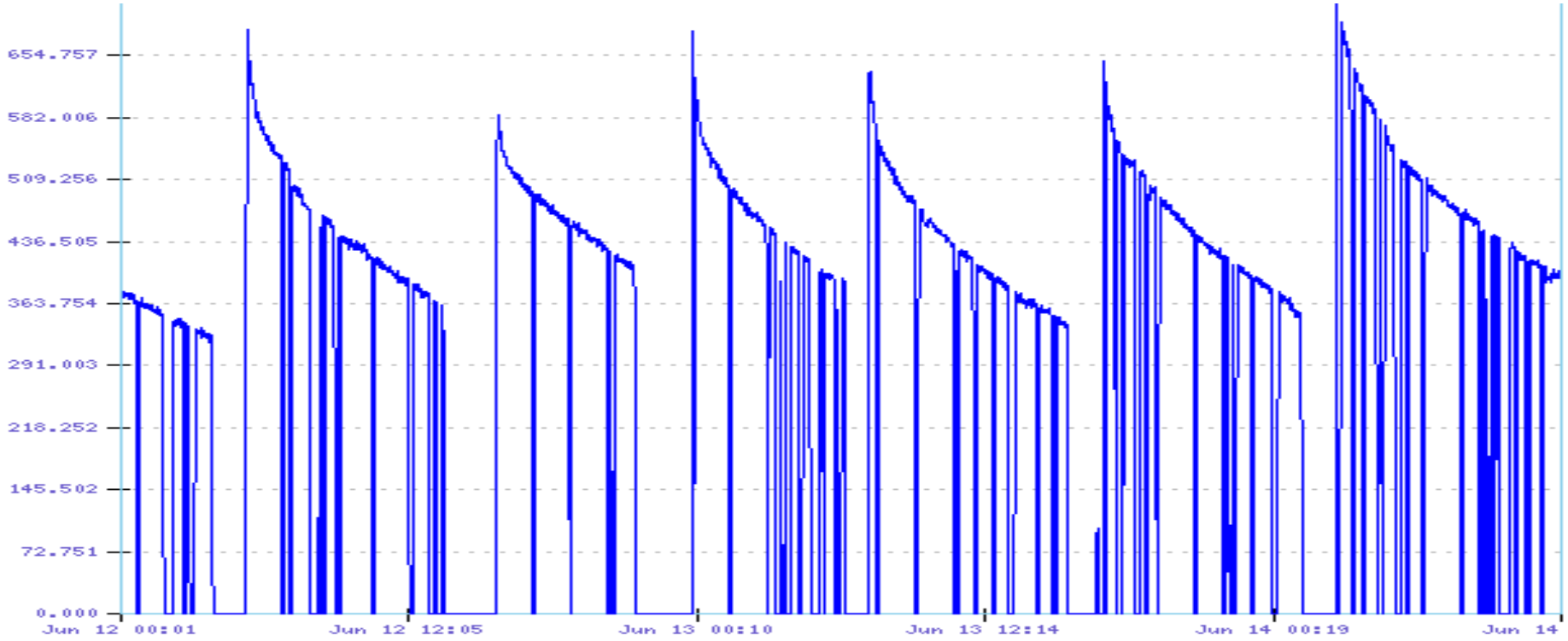
Tuesday, 7AM

From Friday 8AM to Tuesday 7AM 95h , ~2 days lefts.

5Mevents/shift -> 3-4 shifts missing to reach the BUP goal 110Mevts

Even mor (+2) if restricting to FVTX (less biased) triggers. In addition, DAQ inefficiency increases

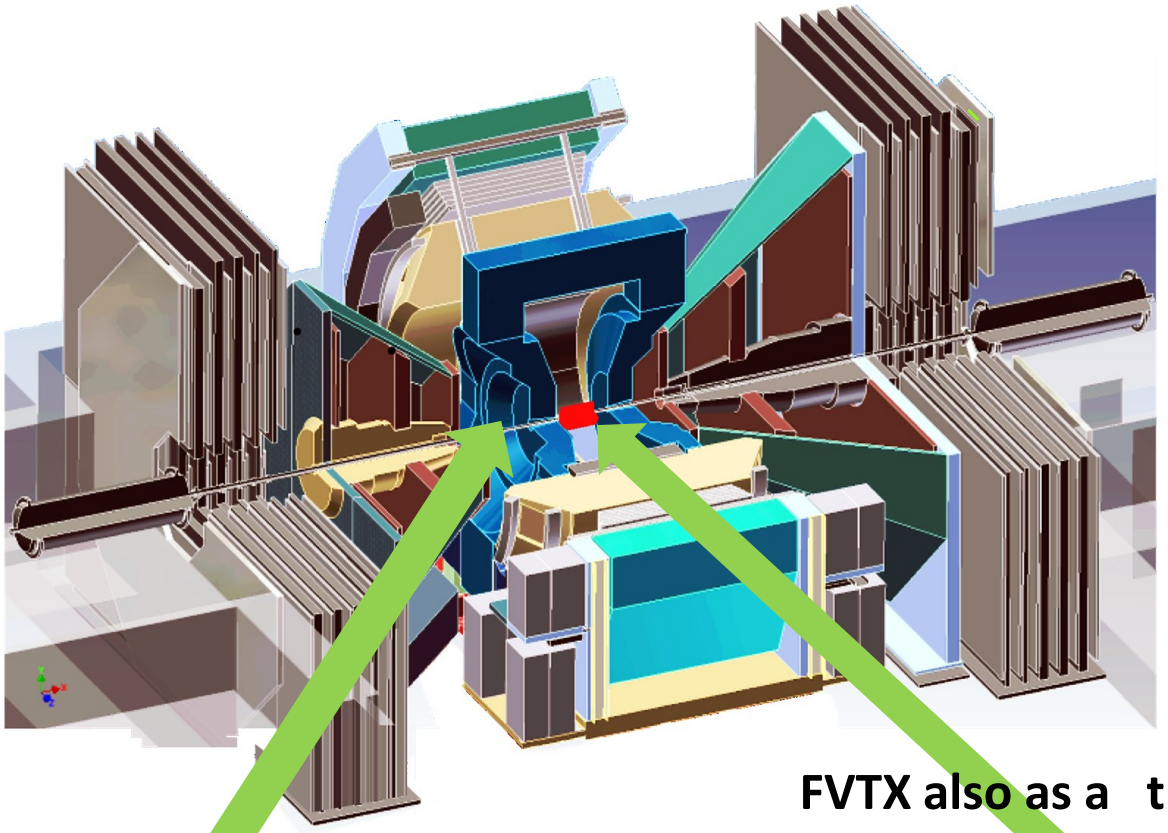
A DAQ problem developed recently and creates additionnal downtime



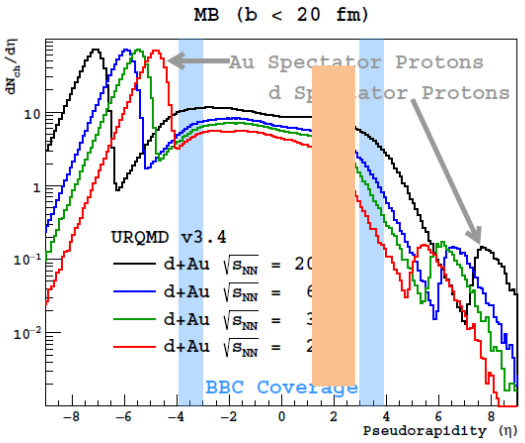
Summary

- Difficult start, high backgrounds, for dAu20GeV, but finally thanks to running up to Wednesday morning we have reached the BUP goal and quite reached our updated goal. **dAu 20 GeV was a challenge, it is a success !!**
- dAu 39 GeV « high precision »: very good beam condition and uptime for the 4 first days of this 6 days period
- Higher rates than foreseen but **still need at least one more day** (3-4 shifts) **to reach BUP** (=updated) **goal**. DAQ problems and trigger imply more.
- And conclude this first (and last ?) BES exploration of the small systems with d-A collisions at RHIC

At 20 GeV FVTX sees multiplicity > 1



3.1<|η|<4.

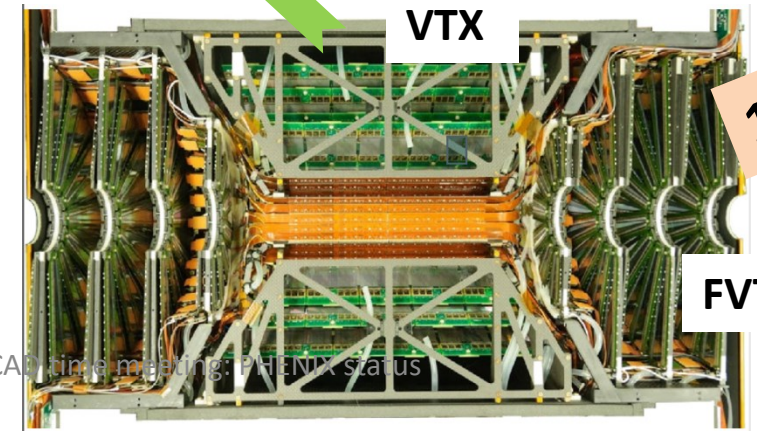


FVTX also as a triggers

BBC

64 Cherenkov quartz

VTX



1.2<|η|<2.7

FVTX